

WHAT IS CLAIMED IS:

1. A method for installing or aligning a bridge for facilitating communication between nodes in a wireless computer network, the method comprising:

after a first bridge is turned on for the first time or reset to factory default settings, (i) automatically searching for a second bridge to associate with the first bridge, (ii) automatically associating the first bridge with the second bridge when the second bridge is found, and (iii) automatically displaying one or more indicators associated with the first bridge which indicate a signal strength of one or more signals received by the first bridge from the second bridge when the second bridge is associated with first bridge.

2. A method as recited in claim 1, wherein the searching, associating, and displaying operations (i) through (iii) are automatically performed without any configurations being set up by a user.

3. A method as recited in claim 1, wherein the searching includes:  
searching for a master for a predetermined time period; and  
when a master is not found after the predetermined time period, sending periodic beacons on a selected channel so that a slave can associate with the first bridge, wherein each beacon indicates that the first bridge is being defined as a master.

4. A method as recited in claim 3, wherein the one or more indicators display the signal strength of the signal received by the first bridge from the found master after the master is found or display the signal strength of the signal received by the first bridge from a slave that has associated with the first bridge.

5. A method as recited in claim 3, further comprising when a master is found, associating the first bridge with the found master.

6. A method as recited in claim 1, wherein the signal strength is indicated by being displayed audibly by the one or more indicators associated with the first bridge.

5 7. A method as recited in claim 1, wherein the signal strength is indicated by being displayed visually by the one or more indicators.

8. A method as recited in claim 7, wherein the one or more indicators include one or more light emitting devices coupled to the first bridge.

9. A method as recited in claim 7, wherein a different visual mode is displayed  
10 on a plurality of indicators for different signal strength value ranges and the different visual modes include different combinations of at least (i) displaying a steady color, (ii) displaying a slow blinking color, and (iii) displaying a fast blinking color.

10. A method as recited in claim 7, wherein a different visual mode is displayed  
15 on a plurality of indicators for different signal strength value ranges and the different visual modes include different combinations of at least (i) displaying a steady color, (ii) displaying a very slow blinking color (iii) displaying a slow blinking color, and (iv) displaying a fast blinking color.

11. A method as recited in claim 1, further comprising outputting the signal strength on a port of the first bridge as a measurable parameter.

12. A method as recited in claim 11, further comprising when a network port of the first bridge is accessed by a processing node, providing the signal strength through such network port to the processing node.

13. A method as recited in claim 1, wherein the indicated signal strength is an  
5 average signal strength over a specified time period.

14. A method as recited in claim 3, wherein searching for a master is only performed when the first bridge is not preconfigured as a master, and wherein when the first bridge is preconfigured as a master, periodic beacons are sent on a selected channel so that a slave can associate with the first bridge without waiting until after the predetermined time  
10 period for finding a master.

15. A method as recited in claim 1, further comprising:  
adjusting an antenna of the first bridge until the indicated signal strength reaches a maximum value.

16. A method as recited in claim 15, wherein the antenna is adjusted without  
15 using a measuring device to measure an output signal that is output from the first bridge or interfacing a processing device with the first bridge.

17. A method as recited in claim 1, further comprising:  
obtaining and storing a plurality of received signal strength values of signals received from the second bridge by the first bridge,  
20 wherein the indicated signal strength is an average of the plurality of received signal strengths.

18. A method as recited in claim 17, wherein the indicated signal strength is displayed until an installation mode of the first bridge completes.

19. A method as recited in claim 17, wherein the indicated signal strength is displayed until an optimum indicated signal strength is reached.

5 20. A method as recited in claim 18, further comprising preventing the passing of traffic through the bridge until the installation mode is exited.

21. A computer system operable to install or align a bridge for facilitating communication between nodes in a wireless computer network, the computer system comprising:

10 one or more processors;

one or more memory, wherein at least one of the processors and memory are adapted for:

15 after a first bridge is turned on for the first time or reset to factory default settings, (i) automatically searching for a second bridge to associate with the first bridge, (ii) automatically associating the first bridge with the second bridge when the second bridge is found, and (iii) automatically displaying one or more indicators associated with the first bridge which indicate a signal strength of one or more signals received by the first bridge from the second bridge when the second bridge is associated with first bridge.

20 22. A computer system as recited in claim 21, wherein the searching, associating, and displaying operations (i) through (iii) are automatically performed without any configurations being set up by a user.

23. A computer system as recited in claim 21, wherein the searching includes:

searching for a master for a predetermined time period; and

when a master is not found after the predetermined time period, sending periodic beacons on a selected channel so that a slave can associate with the first bridge, wherein  
5 each beacon indicates that the first bridge is being defined as a master.

24. A computer system as recited in claim 23, wherein the one or more indicators display the signal strength of the signal received by the first bridge from the found master after the master is found or display the signal strength of the signal received by the first bridge from a slave that has associated with the first bridge.

10 25. A computer system as recited in claim 23, wherein at least one of the processors and memory are further adapted for associating the first bridge with the found master when a master is found.

26. A computer system as recited in claim 21, wherein the signal strength is indicated by being displayed audibly by the one or more indicators associated with the first  
15 bridge.

27. A computer system as recited in claim 21, wherein the signal strength is indicated by being displayed visually by the one or more indicators.

28. A computer system as recited in claim 27, wherein the one or more indicators include one or more light emitting devices coupled to the first bridge.

20 29. A computer system as recited in claim 27, wherein a different visual mode is displayed on a plurality of indicators for different signal strength value ranges and the

different visual modes include different combinations of at least (i) displaying a steady color, (i) displaying a slow blinking color, and (ii) displaying a fast blinking color.

30. A computer system as recited in claim 27, wherein a different visual mode is displayed on a plurality of indicators for different signal strength value ranges and the  
5 different visual modes include different combinations of at least (i) displaying a steady color, (ii) displaying a very slow blinking color (iii) displaying a slow blinking color, and (iv) displaying a fast blinking color.

31. A computer system as recited in claim 21, wherein the indicated signal strength is an average signal strength over a specified time period.

10 32. A computer system as recited in claim 23, wherein searching for a master is only performed when the first bridge is not preconfigured as a master, and wherein when the first bridge is preconfigured as a master, beacons are sent on a selected channel so that a slave can associate with the first bridge without waiting until after the predetermined time period for finding a master.

15 33. A computer system as recited in claim 21, wherein at least one of the processors and memory are further adapted for:

obtaining and storing a plurality of received signal strength values of signals sent by the second bridge to the first bridge,

20 wherein the indicated signal strength is an average of the plurality of received signal strengths.

34. A computer system as recited in claim 21, wherein the indicated signal strength is displayed until an installation mode of the first bridge completes.

35. A computer system as recited in claim 21, wherein the indicated signal strength is displayed until optimum indicated signal strength is reached.

36. A computer program product for installing or aligning a bridge for facilitating communication between nodes in a wireless computer network, the computer program  
5 product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product configured for:

after a first bridge is turned on for the first time or reset to factory default  
10 settings, (i) automatically searching for a second bridge to associate with the first bridge, (ii) automatically associating the first bridge with the second bridge when the second bridge is found, and (iii) automatically displaying one or more indicators associated with the first bridge which indicate a signal strength of one or more signals received by the first bridge from the second bridge when the second bridge is  
15 associated with first bridge.

37. A computer program product as recited in claim 36, wherein the searching, associating, and displaying operations (i) through (iii) are automatically performed without any configurations being set up by a user.

38. A computer program product as recited in claim 36, wherein the searching  
20 includes:

searching for a master for a predetermined time period; and

when a master is not found after the predetermined time period, sending periodic beacons on a selected channel so that a slave can associate with the first bridge, wherein each beacon indicates that the first bridge is being defined as a master.

39. A computer program product as recited in claim 38, wherein the one or more indicators display the signal strength of the signal received from the found master after the master is found or display the signal strength of the signal received by the first bridge from a slave that has associated with the first bridge.

40. A computer program product as recited in claim 38, the computer program instructions stored within the at least one computer readable product being further configured for associating the first bridge with the found master when a master is found.

41. A computer program product as recited in claim 36, wherein the signal strength is indicated by being displayed audibly by the one or more indicators associated with the first bridge.

42. A computer program product as recited in claim 36, wherein the signal strength is indicated by being displayed visually by the one or more indicators.

43. A computer program product as recited in claim 42, wherein the one or more indicators include one or more light emitting devices coupled to the first bridge.

44. A computer program product as recited in claim 42, wherein a different visual mode is displayed on a plurality of indicators for different signal strength value ranges and the different visual modes include different combinations of at least (i) displaying a steady color, (i) displaying a slow blinking color, and (ii) displaying a fast blinking color.



45. A computer program product as recited in claim 42, wherein a different visual mode is displayed on a plurality of indicators for different signal strength value ranges and the different visual modes include different combinations of at least (i) displaying a steady color, (ii) displaying a very slow blinking color (iii) displaying a slow blinking color, and  
5 (iv) displaying a fast blinking color.

46. A computer program product as recited in claim 36, wherein the indicated signal strength is an average signal strength over a specified time period.

47. A computer program product as recited in claim 38, wherein searching for a master is only performed when the first bridge is not preconfigured as a master, and wherein  
10 when the first bridge is preconfigured as a master, periodic beacons are sent on a selected channel so that a slave can associate with the first bridge without waiting until after the predetermined time period for finding a master.

48. A computer program product as recited in claim 36, the computer program instructions stored within the at least one computer readable product being further  
15 configured for:

obtaining and storing a plurality of received signal strength values of signals sent by the second bridge to the first bridge,

wherein the indicated signal strength is an average of the plurality of received signal strengths.

20 49. A computer program product as recited in claim 36, wherein the indicated signal strength is displayed until an installation mode of the first bridge completes.

50. A computer program product as recited in claim 36, wherein the indicated signal strength is displayed until optimum indicated signal strength is reached.

51. A computer program product as recited in claim 49, the computer program instructions stored within the at least one computer readable product being further  
5 configured for preventing the passing of traffic through the bridge unit the installation mode is exited.

52. An apparatus for installing or aligning a bridge for facilitating communication between nodes in a wireless computer network, comprising:

means for after a first bridge is turned on for the first time or reset to factory  
10 default settings, (i) automatically searching for a second bridge to associate with the first bridge, (ii) automatically associating the first bridge with the second bridge when the second bridge is found, and (iii) automatically displaying one or more indicators associated with the first bridge which indicate a signal strength of one or more signals received by the first bridge from the second bridge when the second  
15 bridge is associated with first bridge.

53. An apparatus as recited in claim 52, wherein the searching, associating, and displaying operations (i) through (iii) are automatically performed without any configurations being set up by a user.

54. An apparatus as recited in claim 52, wherein the searching includes:

20 searching for a master for a predetermined time period; and

when a master is not found after the predetermined time period, sending periodic beacons on a selected channel so that a slave can associate with the first bridge, wherein each beacon indicates that the first bridge is being defined as a master.

5 55. An apparatus as recited in claim 54, wherein the one or more indicators display the signal strength of the signal sent from the found master after the master is found or display the signal strength of the signal sent to the first bridge from a slave that has associated with the first bridge.